

Web Supplementary Material of the article
“Extending the basic local independence model
to polytomous data”

A list of figures follows. Each figure displays the results obtained in a different condition of the simulation study (see Section 4.1 of the article for a detailed description of the simulation design) for the two scenarios “Monotonicity constraints do not hold in the data” (Figures 1 to 5) and “Monotonicity constraints hold in the data” (Figures 6 to 10). Furthermore, Figure 11 shows the parameter estimates of the constrained PoLIM obtained in the empirical application.

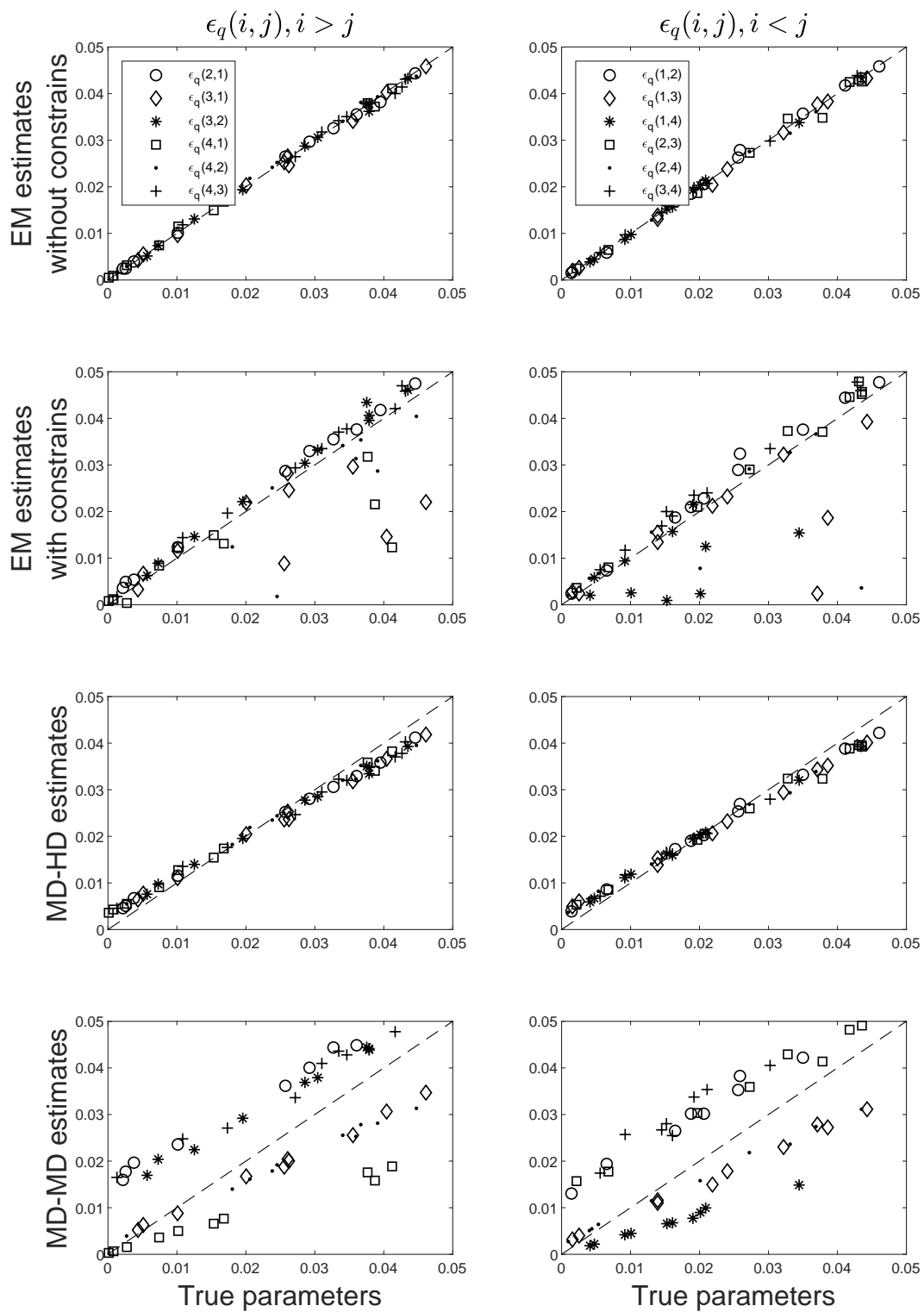


Figure 1: Parameter recovery of the PoLIM obtained by the four estimation procedures when monotonicity constraints do not hold in the data, sample size is $N = 2,000$ and $\epsilon_q^i, i \geq .85$.

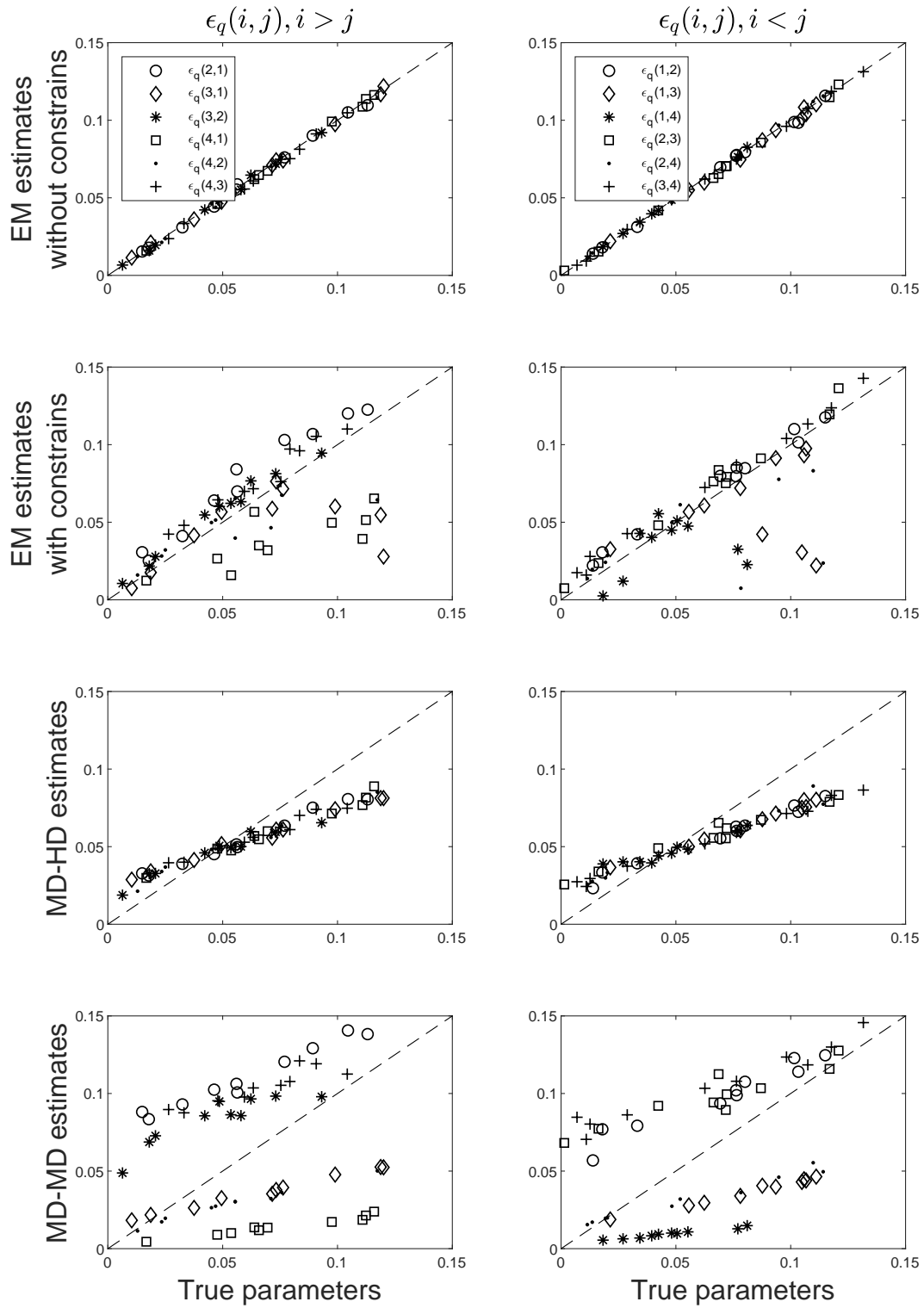


Figure 2: Parameter recovery of the PoLIM obtained by the four estimation procedures when monotonicity constraints do not hold in the data, sample size is $N = 2,000$ and $\epsilon_q^i, i \geq .75$.

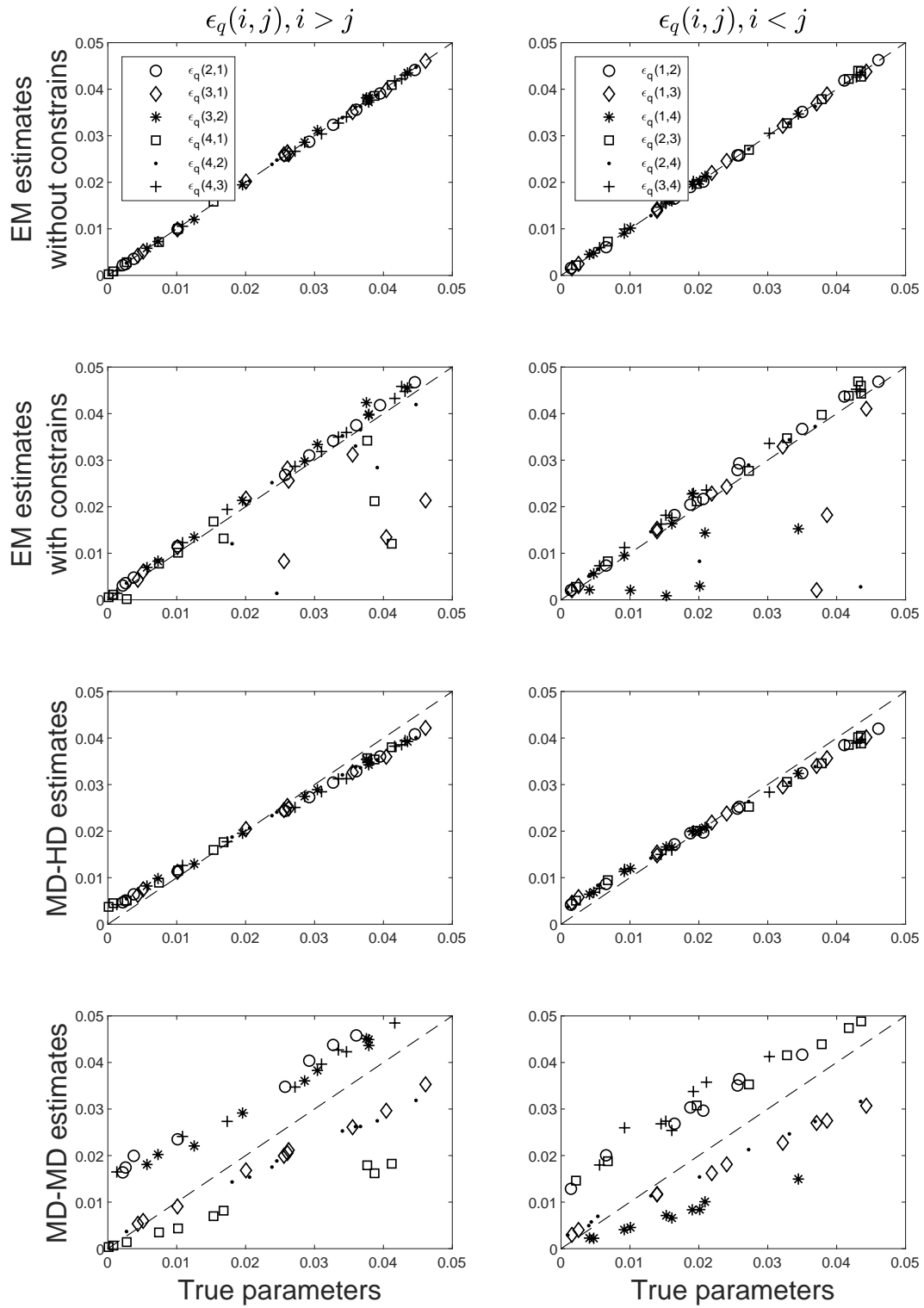


Figure 3: Parameter recovery of the PoLIM obtained by the four estimation procedures when monotonicity constraints do not hold in the data, sample size is $N = 5,000$ and $\epsilon_q^i, i \geq .95$.

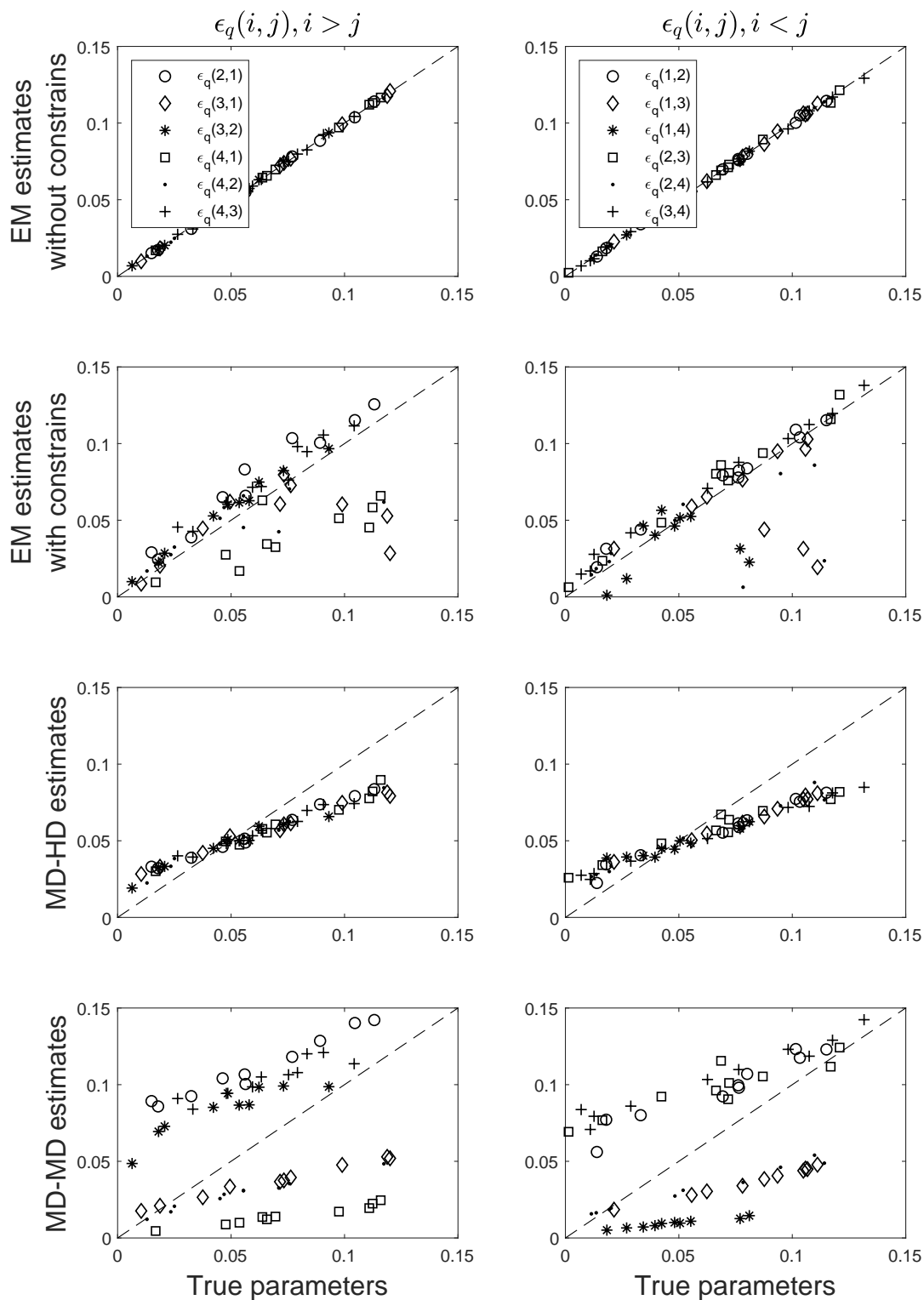


Figure 4: Parameter recovery of the PoLIM obtained by the four estimation procedures when monotonicity constraints do not hold in the data, sample size is $N = 5,000$ and $\epsilon_q i, i \geq .85$.

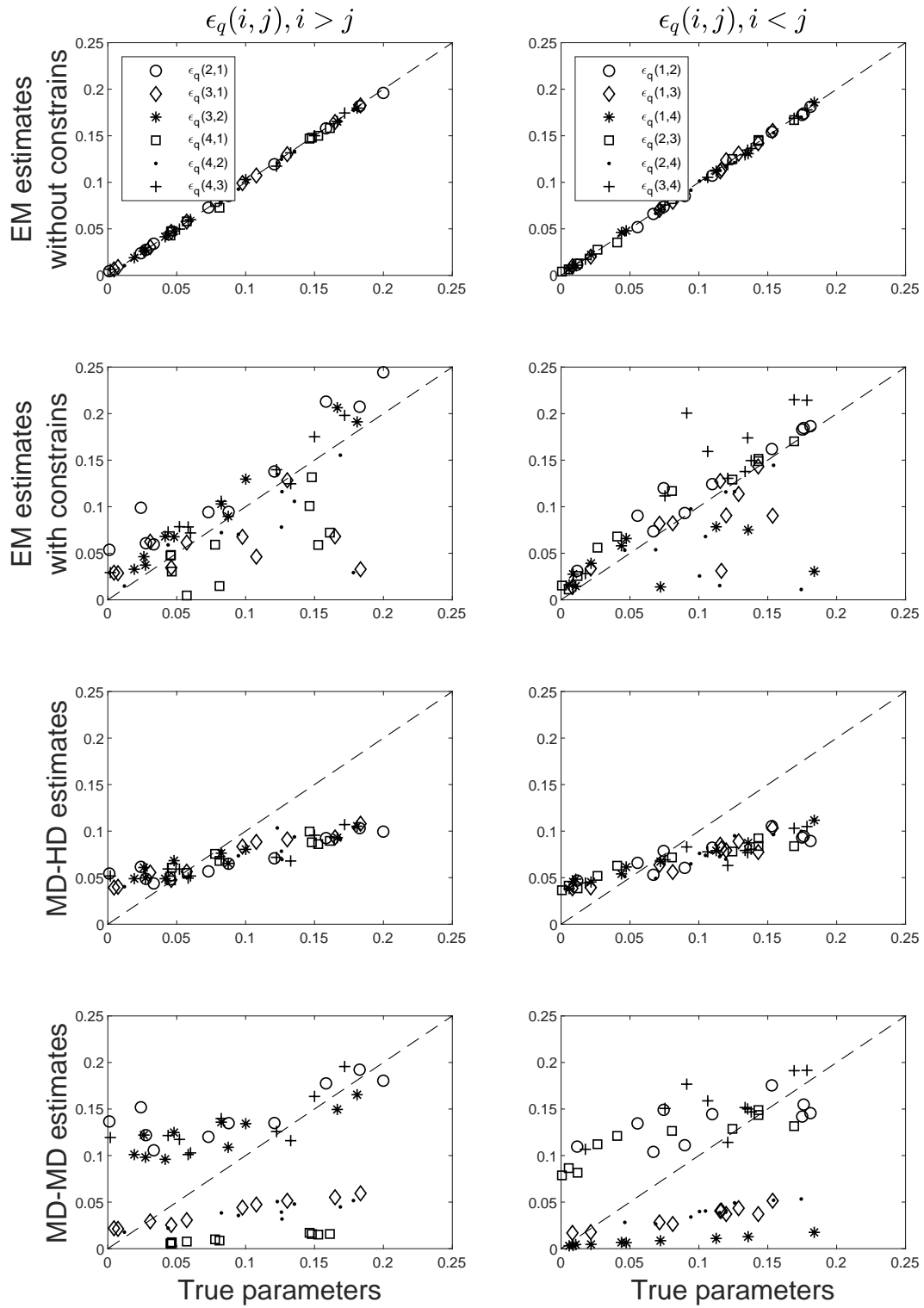


Figure 5: Parameter recovery of the PoLIM obtained by the four estimation procedures when monotonicity constraints do not hold in the data, sample size is $N = 5,000$ and $\epsilon_q i, i \geq .75$.

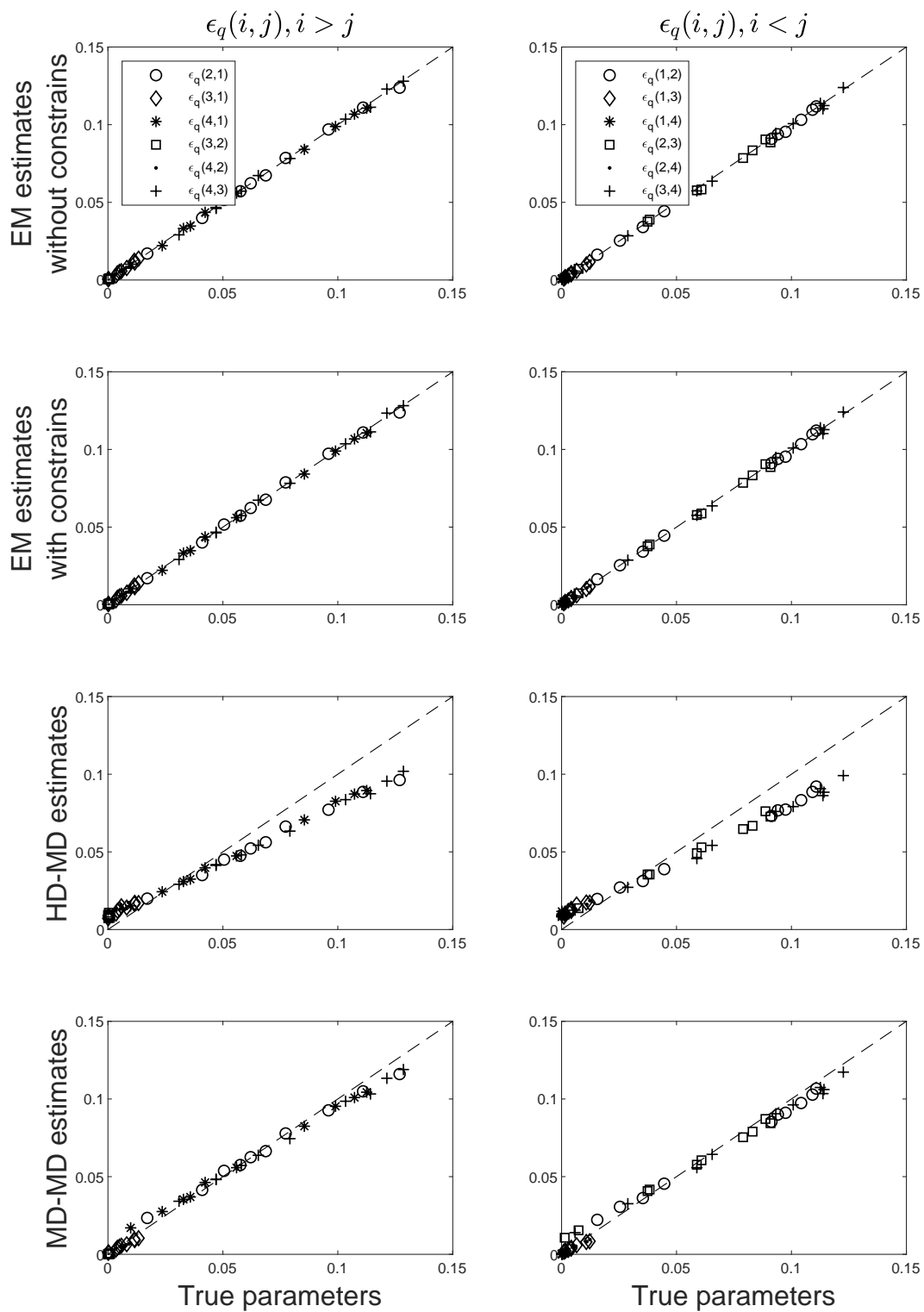


Figure 6: Parameter recovery of the PoLIM obtained by the four estimation procedures when monotonicity constraints hold in the data, sample size is $N = 2,000$ and $\epsilon_q i, i \geq .85$.

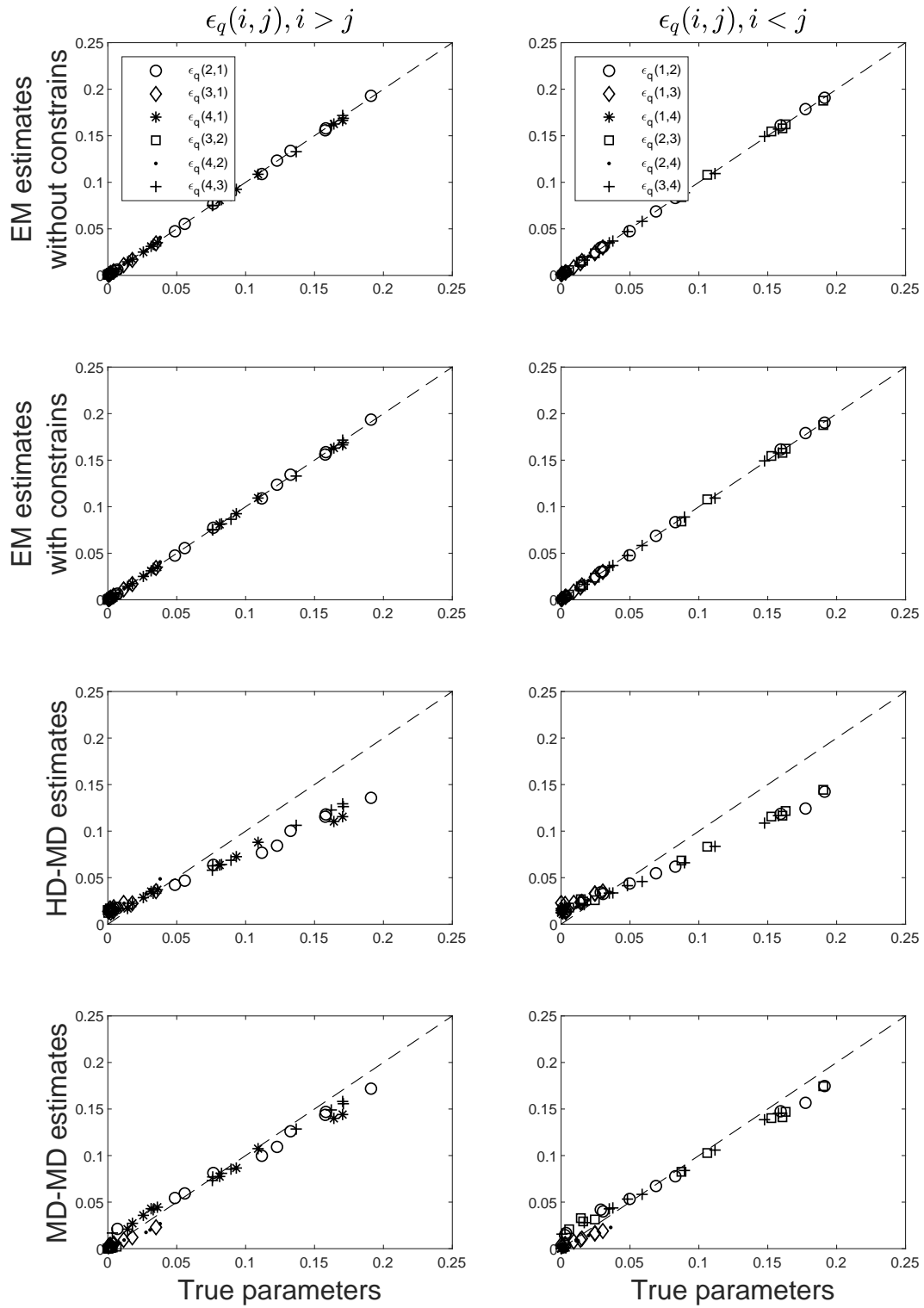


Figure 7: Parameter recovery of the PoLIM obtained by the four estimation procedures when monotonicity constraints hold in the data, sample size is $N = 2,000$ and $\epsilon_q i, i \geq .75$.

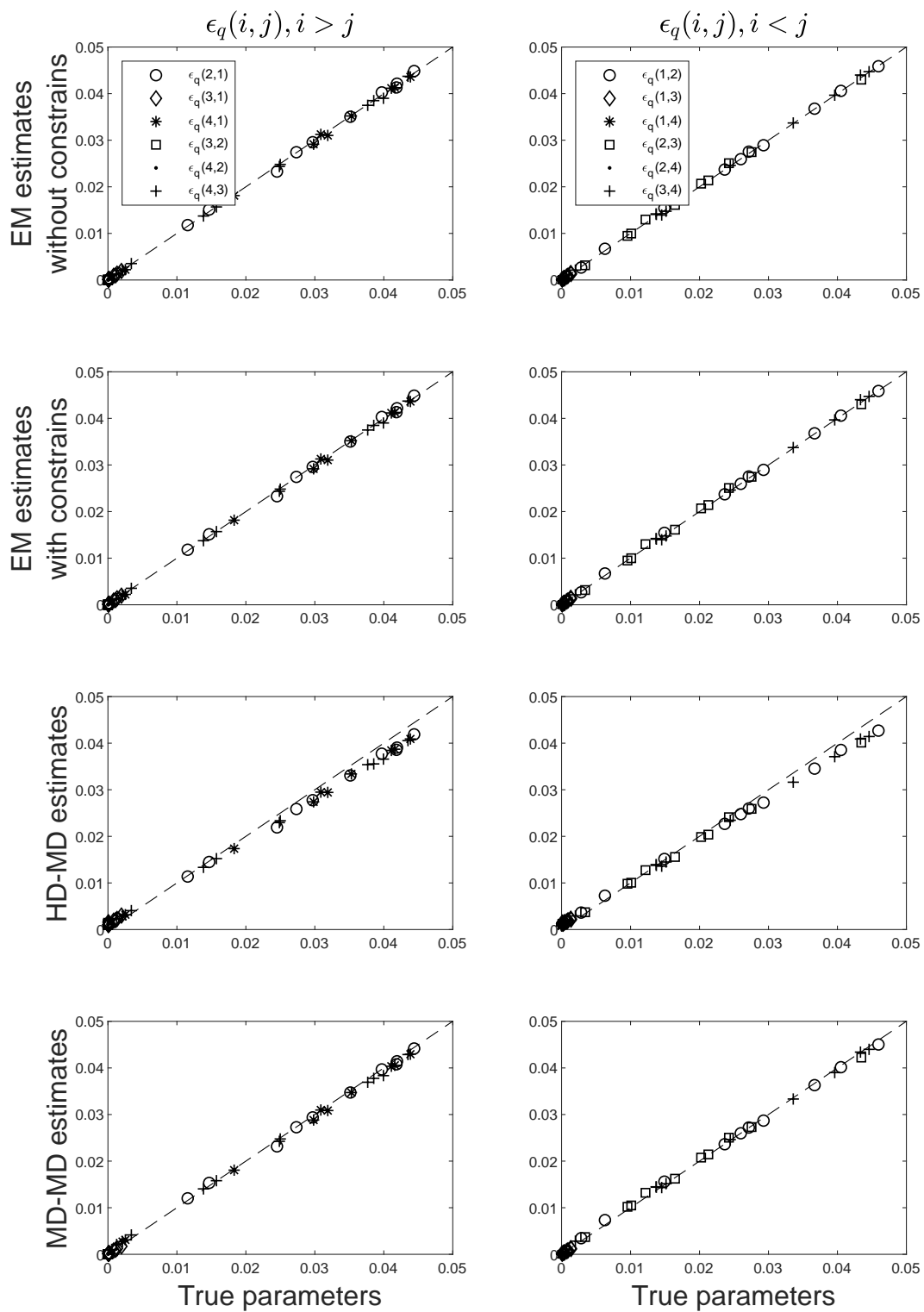


Figure 8: Parameter recovery of the PoLIM obtained by the four estimation procedures when monotonicity constraints hold in the data, sample size is $N = 5,000$ and $\epsilon_q i, i \geq .95$.

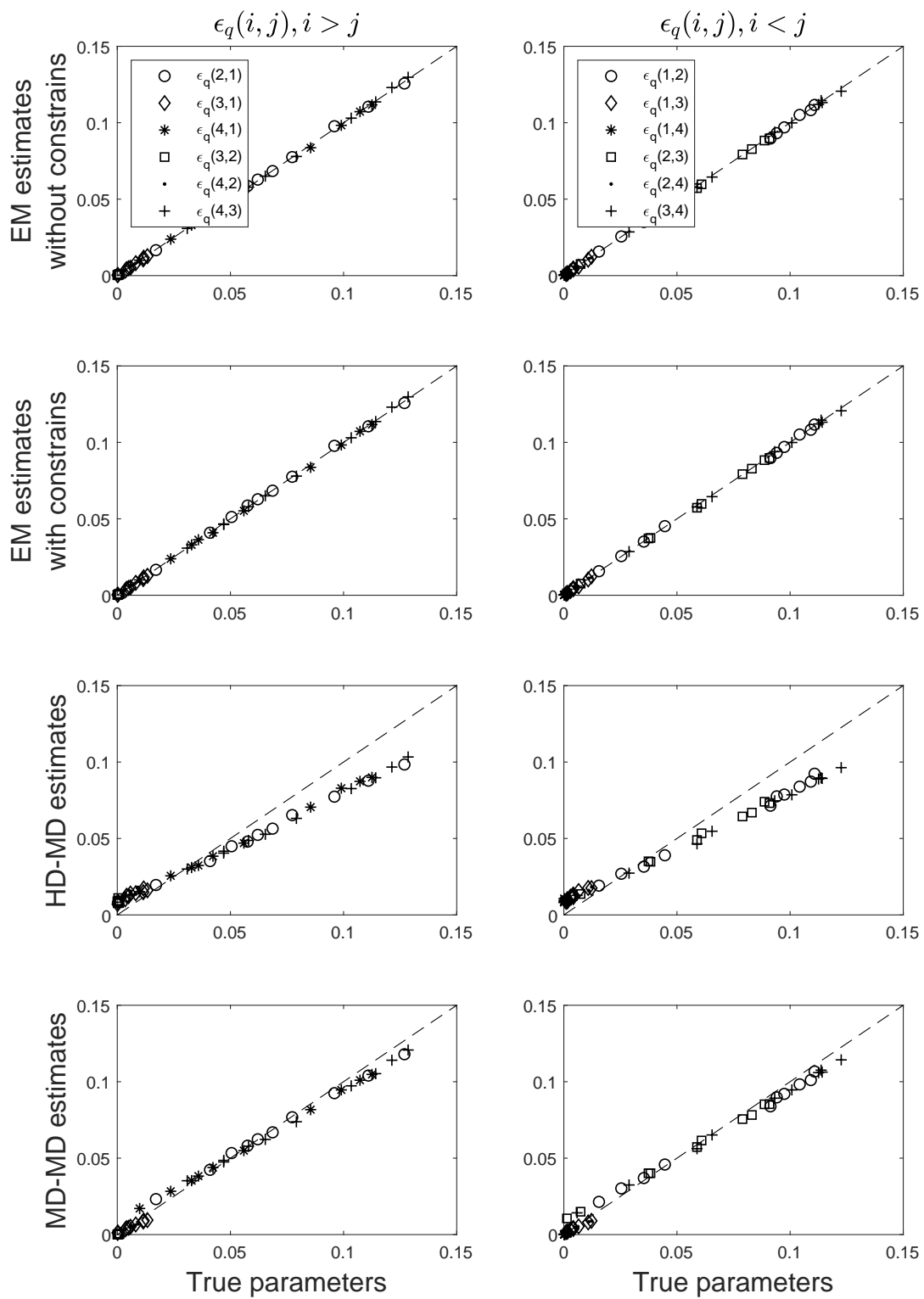


Figure 9: Parameter recovery of the PoLIM obtained by the four estimation procedures when monotonicity constraints hold in the data, sample size is $N = 5,000$ and $\epsilon_q i, i \geq .85$.

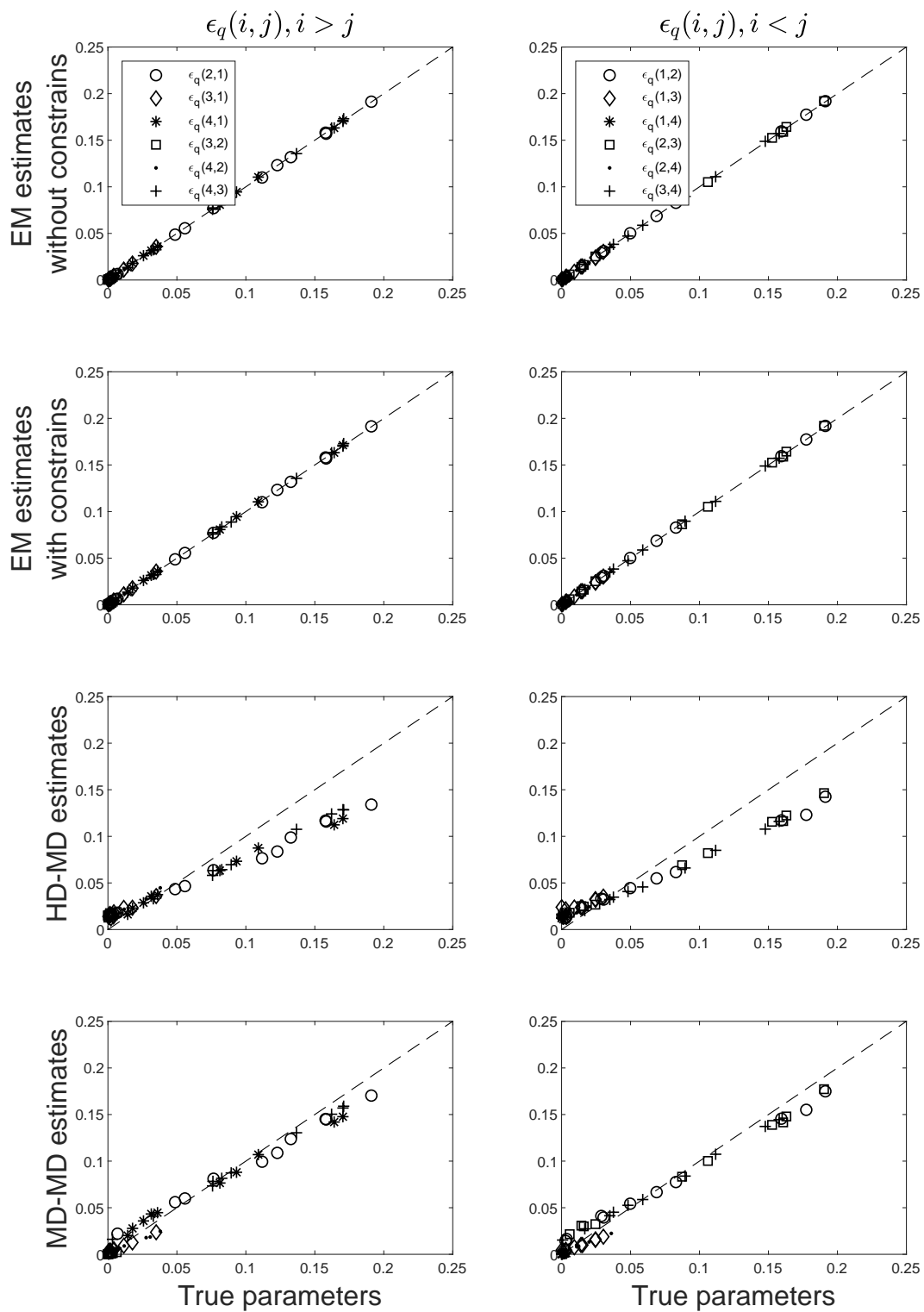


Figure 10: Parameter recovery of the PoLIM obtained by the four estimation procedures when monotonicity constraints hold in the data, sample size is $N = 5,000$ and $\epsilon_q i, i \geq .75$.

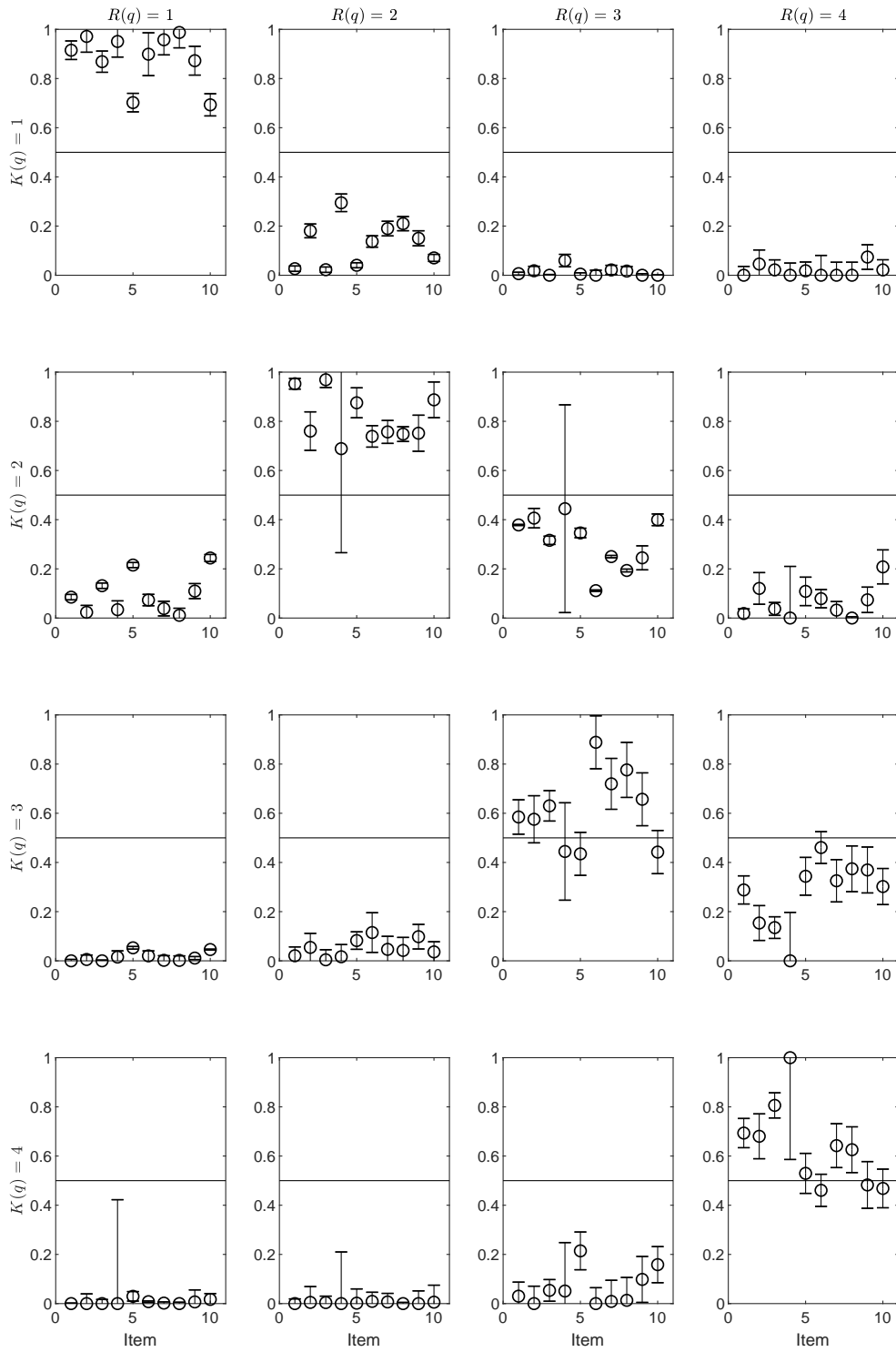


Figure 11: Parameter estimates of the constrained PoLIM obtained in the empirical application.